



PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 0440PCT	FOR FURTHER ACTION		See Form PCT/PEA/416
International application No. PCT/JP2005/000820	International filing date (<i>day/month/year</i>) 18.01.2005	Priority date (<i>day/month/year</i>) 22.01.2004	
International Patent Classification (IPC) or national classification and IPC INV. B60K6/04 F16H61/00			
Applicant TOYOTA JIDOSHA KABUSHIKI KAISHA et al.			
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 6 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p style="margin-left: 20px;">a. <input type="checkbox"/> <i>sent to the applicant and to the International Bureau</i> a total of sheets, as follows:</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p style="margin-left: 20px;">b. <input type="checkbox"/> (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>			
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input checked="" type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application</p>			
Date of submission of the demand 16.08.2005		Date of completion of this report 07.06.2006	
Name and mailing address of the international preliminary examining authority:  European Patent Office - Gitschiner Str. 103 D-10958 Berlin Tel. +49 30 25901 - 0 Fax: +49 30 25901 - 840		Authorized officer Tamme, H-M Telephone No. +49 30 25901-542 <div style="text-align: right;">  </div>	

INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITYInternational application No.
PCT/JP2005/000820

AP20 Rec'd PCT/PTO 18 JUL 2006

Box No. I Basis of the report

1. With regard to the **language**, this report is based on
- ☒ the international application in the language in which it was filed
 - ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of:
 - ☐ international search (under Rules 12.3(a) and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4(a))
 - ☐ international preliminary examination (under Rules 55.2(a) and/or 55.3(a))
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

Description, Pages

1-34 as originally filed

Claims, Numbers

1-21 as originally filed

Drawings, Sheets

1/11-11/11 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/JP2005/000820

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	2-21
	No: Claims	1
Inventive step (IS)	Yes: Claims	
	No: Claims	1-21
Industrial applicability (IA)	Yes: Claims	1-21
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

INTERNATIONAL PRELIMINARY
REPORT ON PATENTABILITY
(SEPARATE SHEET)

International application No.

PCT/JP2005/000820

Re Item V**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

1. Reference is made to the following documents:
D1: WO 02/47931 A
D2: JP 2000230442 A
2. With respect to claim 1, D1 discloses a control system (suitable) for a hybrid vehicle, in which a second prime mover (E1) is connected to an output member (AW) to which a power is transmitted from a first prime mover (VM) through a transmission (G) in which a torque capacity is varied in accordance with an oil pressure (implicit), and which has a first hydraulic pump (implicit) driven by the first prime mover (VM) for establishing an oil pressure to be fed to the transmission (G), and a second hydraulic pump (implicit) arranged in parallel (implicit) with the first hydraulic pump and driven by an electric motor (implicit), whereby a torque limiting means (implicit) for limiting an output torque of the second prime mover (E1) temporarily, at a starting time of the first prime mover (VM), (characterising portion of claim 4).

Thus, D1 discloses all the features of claim 1.

Present claim 1 merely defines a control system comprising a torque limiting means. This fact is explained in more detail in section VIII.

Even if all the features in the preamble were unambiguously claimed the use of a mechanical oil pump driven by the engine and an electrically driven oil pump are widely known in the field for supplying reliable oil pressure in a transmission. Consequently, although not explicitly mentioned in D1, those features are to be present implicitly.

Further, D1 discloses in claim 4, that for starting the first prime mover (VM) the torque of at least one of the second prime movers is changed, which also includes that the

torque is limited.

Moreover, it should be noted that the assessment of novelty is an absolute assessment of the features clearly defined in the claim and present in the prior art.

3. The features of dependent claims 2 to 13 and 15 to 21 are generally known in the prior art cited in the search report. Since no particular technical problem being solved by these features can be determined, no contribution to the presently available prior art can be seen consequently.
4. Referring to claim 14, as the preamble of claim 14 is identical with the preamble of claim 1 D1 discloses all the features of the preamble of claim 14 as described in point 2 above.

With respect to the characterising portion of claim 14, D2 discloses load accumulating means (implicit by sensing a cumulative load TA) for accumulating a load depending on a line pressure of the transmission fed by the second hydraulic pump (motor-driven oil pump) and the oil temperature for every preset time (implicit), and for subtracting preset value from a cumulative value of the load in case the second hydraulic pump is halted (TA, Tar) and a drive control means (flag F1) for inhibiting a halt of the first prime mover (engine; S108) in case the cumulative value of the load exceeds a preset value, and for allowing the halt of the first prime mover in case the cumulative value of the load becomes smaller than another preset value (abstract).

For the purpose of obtaining required hydraulic pressure it would be obvious for the skilled person to apply the teaching of D2 in a control system as described in D1 and thereby arriving at a control system as defined in claim 14.

Hence, the subject-matter of claim 14 does not involve an inventive step.

Re Item VII

Certain defects in the international application

1. According to the requirements of Rule 11.13(m) PCT the same feature shall be denoted by the same reference sign throughout the application. This requirement is not met in view of the use of "*pump driving means (31)*", "*halting means (31)*", "*hydraulic control system (31)*" on page 18, "*halt control means (13)*", "*electronic control unit 13*" on page 13".
2. Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the document D1 is not mentioned in the description, nor is this document identified therein.
3. The patent number JP 2001-118901 stated on page 2 of the description is erroneous.

Re Item VIII

Certain observations on the international application

1. With respect to claim 1 there is defined a control system comprising a torque limiting means which refers to features which are not defined because the control system is merely suitable for a hybrid vehicle comprising further features. This renders the scope of the claim as well as its subject-matter unclear, Article 6 PCT.
The claim should have rather been drafted as "Hybrid vehicle with a control system, in which vehicle a second prime mover...".

Since the hybrid vehicle is not defined all the features belonging to that vehicle are not defined either and therefore, these features could not be considered for the assessment of novelty.